

Partnering Opportunities in 7x



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Astronomy and Physics (including heliophysics) is Alive and Well at JPL!

- Four operating missions, six missions and instruments in development
- Rich technology development in key areas:
 - *Detectors and receivers*
 - *Optics*
 - *Cryogenics*
 - *Structures*
- Renewed emphasis on ground-based and suborbital instruments and opportunities
- Strong science groups, both theoretical and observational
- Aggressive, opportunistic new business approach
- Highly leveraged use of internal investment funds

Astronomy and Physics Main Science Thrusts

Dark Energy

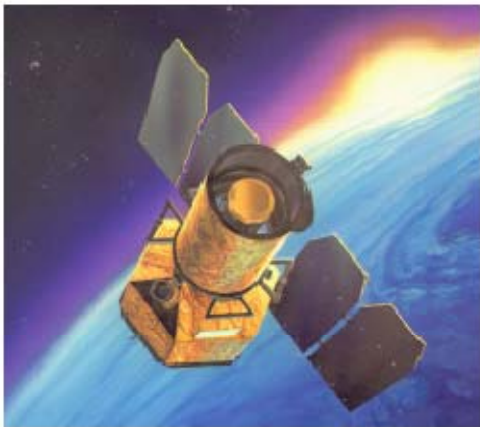
**CMB and
Inflation**

Exoplanets

Cosmic Origins

Gravity Waves

JPL Astrophysics Missions Operating or in Development



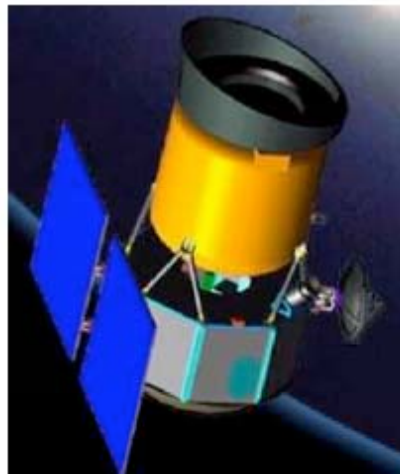
GALEX



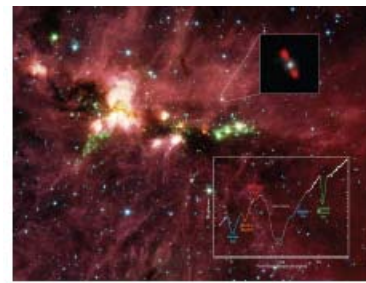
Spitzer



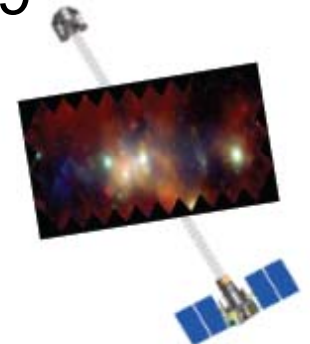
Herschel and Planck
2008/2009



KEPLER and WISE, 2009



MIRI on JWST
2013



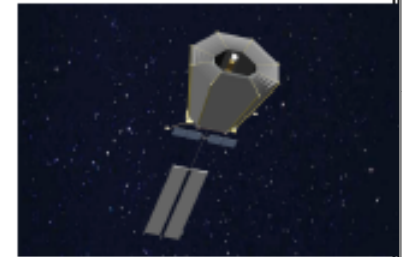
NuSTAR
2011

Major Astrophysics Mission Study Activities



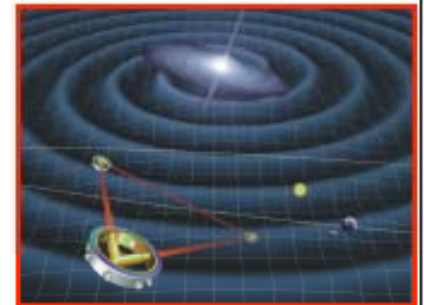
Space Interferometry Mission (SIM)

Terrestrial Planet Finder - C



Terrestrial Planet Finder - I

Laser Interferometer Space Antenna (LISA)

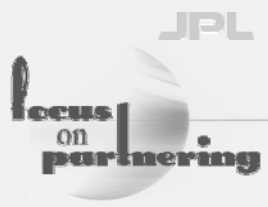


Major Astrophysics Mission Study Activities, cont.

JPL is leading 11 of the 19 selected ASMCS studies and participating in 15 of the 19.

Topics Include:

- Exoplanet missions – coronagraphy, interferometry, and astrometry
- Mars Laser ranging and low frequency lunar radio astronomy
- Large and larger UV, optical, and NIR telescopes
- Astrobiological and exoplanet spectroscopy
- Cosmic inflation missions



JPL Astronomy and Physics New Business Outlook

2008: SMEX/MOO selection to be announced

2008: JDEM AO

2009: Discovery AO

2009: Exoplanet Probe AO

2010: MDEX AO

2011?: Astrophysics Probe AO

Annual?: Salmon Mission of Opportunity calls

JPL Astronomy and Physics Other Areas of Emphasis

- *Suborbital and ground-based instrumentation*
- *Technologies (especially detector and receiver, cryogenics, optics, large structures)*
- *Testing and test facilities*

Bottom Line

We are open to teaming and partnerships in all the areas discussed in this presentation, and others as well.

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